

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior version and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for realizing signaling agent in a network system, the network system comprising media gateways and a media gateway controller in different networks, and at least one agent equipment on a boundary of different networks where a MEGACO protocol is adopted between the media gateways and the media gateway controller, wherein the agent equipment has at least two network addresses: one being a first network address in a network of the media gateway controller and the other one being a second network address in a network of a media gateway side, the method comprising the steps of:

step 1: a media gateway requesting register to the media gateway controller, and the agent equipment dynamically recording message identifier of the media gateway to be registered and network address according to the register message;

step 2: for a MEGACO signaling that is unconcerned with a media stream port of the media gateway, the agent equipment directly forwarding the signaling according to a message identifier in the signaling; and

step 3: for a MEGACO signaling that is concerned with the media stream port, the agent equipment processing media stream attributes correspondingly, and then forwarding the signaling according to the message identifier in the signaling,
wherein step 3 further comprises the steps of:

(1) the agent equipment receiving the MEGACO signaling for establishing or modifying media stream port sent to the media gateway from the media gateway controller, establishing or modifying corresponding media stream forwarding port and forwarding table on the agent equipment, replacing relevant media information in the MEGACO signaling with corresponding network address information of media stream forwarding port on the agent equipment, and forwarding the signaling to corresponding media gateway;

(2) the media gateway processing MEGACO signaling received, and returning a reply signaling; if the MEGACO signaling is a signaling for creating a connection, further recording on the agent equipment a termination ID of the media gateway;

(3) the agent equipment modifying forwarding table of corresponding media stream forwarding port according to the reply signaling received, replacing media information in the signaling with corresponding network address information of media stream forwarding port on the agent equipment, and forwarding to the media gateway controller; and

(4) the media gateway controller sending a subtract signaling for releasing media stream port to the media gateway after calling finishes, the agent equipment releasing corresponding media stream forwarding port after receiving the signaling, and forwarding the signaling to corresponding media gateway.

2. (Previously presented) The method for realizing signaling agent of claim 1, wherein each media gateway under a same media gateway controller has a unique message identifier of the MEGACO signaling, and the media gateway controller distinguishes different media gateways by the message identifier.

3. (Original) The method for realizing signaling agent of claim 1, wherein the message identifier of each MEGACO signaling sent from the media gateway controller to the media gateway comprises the message identifier of the media gateway, and the agent equipment forwards the signaling to a corresponding media gateway according to the message identifier.

4. (Original) The method for realizing signaling agent of claim 1, wherein the IP address and port of the media gateway controller configured on the media gateway are same as the second network address and port of the agent equipment.

5. (Previously presented) The method for realizing signaling agent of claim 1, wherein the registering procedure of step 1 comprises the steps of:
 - 1) the media gateway sending the register message to the media gateway controller, the agent equipment receiving the message on the second network address and corresponding port, recording an IP source address, port number and message identifier of the media gateway sending the message, and generating a piece of information of the media gateway;
 - 2) the agent equipment forwarding the registering message to the media gateway controller through the first network address;
 - 3) the media gateway controller registering the media gateway according to the domain name thereof, after registering successfully, the media gateway controller returning a reply signaling to the media gateway, the message identifier of the reply signaling including information on domain names of the media gateway and the media gateway controller; and
 - 4) the agent equipment receiving the reply signaling from the first network address, analyzing the domain name of the media gateway in the signaling, searching and obtaining address of the media gateway from information recorded, and forwarding to corresponding media gateway from the second network address.
6. (Canceled).
7. (Previously presented) The method for realizing signaling agent of claim 6, wherein step 3) further comprises the steps of: if the signaling received by the agent equipment is the reply signaling of establishing media stream port, recording a termination ID of the media stream port of the media gateway MG on the agent equipment, and determining media stream forwarding port for releasing according to the termination ID.